

### REMARKS

This is in response to the Final Office Action mailed on August 30, 2006 in which claims 1, 4-6, 8-12, 15, 18 and 20-22 were rejected, and claims 7, 13, 14, 19 and 23 were objected to. With this Amendment After Final, claims 1, 8, 10, 11, 15, 18 and 20 are amended, claims 24-26 are added, and claims 4-7 and 21-23 are canceled. Also, the finality of the rejection in the Office Action is traversed, and it is requested that the finality of the rejection be withdrawn and that this Amendment be entered. Reconsideration and allowance of all pending claims are respectfully requested in view of the following remarks.

#### **I. TRAVERSAL OF FINAL REJECTION**

In the Final Office Action, it was stated that Applicant's arguments had been considered, but were considered moot in view of the new ground(s) of rejection. In section 3 of the Office Action, newly cited Swize (U.S. Patent No. 7,054,091) was used to support new grounds for rejection of the pending claims. In the Amendment filed on June 19, 2006, independent claim 1 was amended to incorporate the limitations of original dependent claims 2 and 3. Independent claim 15 was amended to incorporate the limitations of original dependent claims 16 and 17. Since these combinations of claim limitations were presented in the originally filed application, Applicant's amendments did not necessitate the new grounds of rejection of the independent claims, and the finality of the rejection of these claims is improper.

As is clearly stated in MPEP § 706.07(a):

second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p). (Emphasis added)

In the present application, the claims were not amended in a manner which presented a new combination of claim limitations to the Examiner and thus necessitated the new grounds of rejection. The combination of claim limitations found in independent claims 1 and 15 had previously been considered by the Examiner and was the subject of a search by the Examiner.

Further, Swize was not cited in an information disclosure statement, but rather was cited by the Examiner for the first time in the Final Office Action. Therefore, the final rejection is improper, and it is respectfully requested that the finality be removed and the present amendment be entered.

## **II. ALLOWABLE SUBJECT MATTER**

In the Office Action, claims 7, 13-14, 19 and 23 were objected to as being dependent upon a rejected base claim, but were stated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With this Amendment, independent claim 1 is amended to include the limitations of allowable claim 7. Independent claim 15 is amended to include the limitations of allowable claim 23. Therefore it is respectfully submitted that independent claims 1 and 15, as well as dependent claims 8-14 and 18-20 are in condition for allowance.

## **III. CLAIM REJECTIONS**

In the Office Action, claims 1, 4-6, 8-10, 15, 17, 18 and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wiselogle (U.S. Patent No. 6,130,796) in view of Swize (U.S. Patent No. 7,054,091). Claims 11, 12, 21 and 22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wiselogle in view of Swize, further in view of Emo et al. (U.S. Patent No. 6,260,257). As discussed above, independent claims 1 and 15 are herein amended to incorporate limitations from claims indicated by the Examiner to be allowable. Therefore, it is respectfully requested that the rejections under 35 U.S.C. 103(a) be withdrawn. However, new independent claim 24 is added, corresponding to the limitations of original dependent claim 11 along with its base claim and intervening claim. New dependent claims 25 and 26, corresponding respectively to the limitations of original dependent claims 12 and 13, are also added.

New method claim 24 includes the step of “identifying a last usable track on a recording media surface, beyond a default maximum track, as a function of a position error signal (PES) value”. With respect to this limitation in rejected claim 11, the Office Action stated:

As to Claims 11-12, the combination of Wiselogel and Swize discloses the method as claimed in claim 4, but fails to particular disclose wherein identifying the last usable track as a function of a position error signal (PES) value (figs.4-6, 8,10); as per claim 12, Emo et al. discloses that is well known in the art to use average PES and PES for adjusting crash stops (fig.4 col.3, lines 1-16). Therefore, it would have been obvious to of ordinary skill in the art at the time of the invention to modify the method as disclosed by Wiselogel and Swize with the disclosed teachings of Emo et al., the motivation to provide such method with the ability to detect crash stop location on the media, and increase the recording density of the disk drive.

This interpretation of the teachings of Emo et al. (hereafter Emo) is not supported by the Emo reference. For example, referring specifically to the portion of Emo relied upon by the Examiner, Emo states:

In the prior art, servo data is written on the disks before the crash stops are placed in the drive. If the position variance of both the inner and outer crash. stop is  $\sigma^2$ , then the average position lost (i.e. usable position lost for recording data) on a drive where all tracks are written before the crash stop positions are detected is  $6\sigma$ , the worst case stroke (w.c. stroke) indicated in FIG. 4A. . . .

Thus it will be appreciated that in both prior art methods since assumptions are made about the usable data area based on the above techniques, there is a loss of available position for storing information. See Emo at col 2, line 66 – col. 3, line 17.

Here, Emo describes the average position lost as being the “usable portion lost for data recording”, but makes no reference to a position error signal (PES) or a PES value. In fact, Emo does not make reference to PES signals and values in general, and particularly in the context used in claim 24. Claim 24 requires the step of “identifying a last usable track on a recording media surface, beyond a default maximum track, as a function of a position error signal (PES) value”. In contrast, Emo teaches that improvement in recording density can be achieved by testing read/write frequency performance of each of the heads in a multi-head drive using bit error rate (BER) as the parameter, not PES values. See for example Emo at col. 4, lines 58 – col. 5, line 4, stating:

In the present invention, a substantial improvement in the recording density is achieved by, in one aspect, testing the read/write frequency performance of each of the heads in a multi-head drive and for those heads having a lower than

acceptable bit error rate at a predetermined operating frequency reducing the read/write frequency of those heads to bring them up to an acceptable bit error rate performance level; and for heads which have a bit error rate above the acceptable bit error rate at the predetermined operating frequency increasing their read/write frequency by an amount sufficient to make up for the loss of recording density on the head(s) for which the read/write frequency was reduced, but not so much as to fall below the minimum acceptable bit error rate.

While Emo describes using BER to improve recording density, this reference does not teach the claim limitation of previously rejected claim 11 and new claim 24 of “identifying a last usable track on a recording media surface, beyond a default maximum track, as a function of a position error signal (PES) value”. In view of this fact, and in view of the fact that the Examiner has admitted that Wiselogle and Swize fail to disclose this limitation, independent claim 24 is believed to be in condition for allowance. Reconsideration and allowance of claims 24-26 are therefore also respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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